

TA 19

Analysis of PSRO Costs

January 31, 1980

MANUALS

RA

399

A3

TA-19

1980

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH CARE FINANCING ADMINISTRATION
HEALTH STANDARDS AND QUALITY BUREAU

MEMORANDUM

RA
399
A3
TA-19
1980

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE HEALTH CARE FINANCING ADMINISTRATION

Office of the Administrator

TO : Planning and Conditional PSROs
Statewide Councils; Regional
PSRO Project Officers

DATE: January 31, 1980

Technical Assistance Document No. 19

FROM : Administrator

SUBJECT: Analysis of PSRO Review Costs

This document outlines one method which can be used to analyze PSRO review costs. It details an analysis of PSRO review cost/spending patterns prepared by Office of Professional Standards Review Organizations (OPSRO) staff using that method. This analysis was previously shared with PSRO project officers who, in turn, shared portions of the materials with PSROs for use in the ongoing examination and evaluation of their review systems and costs. Through comparative unit cost analysis, PSROs and hospitals can determine ways to effect cost savings using their current review procedures or decide to develop alternative review systems.

OPSRO is committed to helping PSROs reduce their review costs while continuing to carry out effective review systems. This technical assistance document represents part of that commitment. OPSRO is pursuing the development of additional cost models. Any questions raised by the material in this technical assistance document can be directed to Geraldine Ellis, Director, Division of Peer Review.



Leonard D. Schaeffer

Attachment

ANALYSIS OF
PSRO REVIEW COSTS

Contents

	<u>Page</u>
I. Introduction	1
II. Purpose	1
III. Scope and Limitations	2
IV. Analysis Techniques	3
V. Format of Analysis	12
VI. Delegated Review Costs	13
VII. Nondelegated Review - Part II Costs	53
VIII. Areawide Review - Part III Costs	62
IX. Conclusions and Recommendations	70



I. Introduction

In August 1978, PSROs were advised by the draft transmittal "Reduction of PSRO Hospital Review Costs" of the need to reduce unit hospital review costs to a negotiated fixed rate of \$8.70 on the average. Varying degrees of cost cutting will have to be made by nearly all PSROs to meet the \$8.70 national average.

PSROs have expressed concern as to what steps need to be taken to reduce the unit cost of review. For example, some PSROs have asked for guidance in determining the percentage of cases which must be exempted from review to lower the overall unit rate. Other PSROs have asked about the implications of the lower unit cost rate on review coordinator productivity and on review staff job security. Underlying these concerns has been the more general concern that decreased funding for review may lessen the effectiveness of the review system.

This document has been prepared by OPSRO staff to help PSROs and project officers analyze PSRO cost/spending patterns and make decisions as to the review system modifications necessary to reduce the unit cost of review. In brief, this document presents one method for analyzing PSRO cost/spending patterns and defines a model for apportioning the \$8.70 unit cost available for review between the hospital for conducting delegated review and the PSRO for carrying out its areawide review activities (e.g., profile analysis, monitoring, and areawide Medical Care Evaluation studies [MCEs]). This model assumes that \$8.70 is the negotiated unit cost rate for delegated review in the PSRO area. The \$8.70 is apportioned so that \$6.45 is set aside for delegated review and \$2.25 is retained by the PSRO for Part III areawide costs. Although the model does not deal as thoroughly with nondelegated review costs, the principles upon which the delegated model was constructed would apply. The model presented is an example only and is not to be construed as the only way to apportion review costs.

HSQB is pursuing the development of additional models and analytical methodologies to assist PSROs and regional offices in assessing and evaluating cost/spending patterns and refining review systems to meet the challenges of conducting effective and efficient review at the lower cost rate. These other models should be developed during fiscal year 1980.

II. Purpose

The purpose of this technical assistance document is to describe the analytic techniques used by OPSRO staff to examine the cost/spending patterns of a sample of PSROs and delegated hospitals. As a result

of this examination, one model for apportioning the national average review cost of \$8.70 was developed. The model described in this document is as follows:

Delegated Hospital Review Unit Cost (PSRO Part IV Costs)	- \$6.45 (\$5.00 con- current review; \$1.45 MCEs)
PSRO Areawide Review Unit Cost (PSRO Part III Costs)	- 2.25 \$8.70

The \$8.70 was chosen as a present guideline figure because it is the desired national average. Some PSROs and delegated hospitals will conduct review for less than \$8.70 because different review plans incur lower unit costs, and some PSROs are being funded differently depending on local needs, variations, etc.

The model is not meant to be a "cookbook" approach to reducing costs. Rather, it is a guide to keeping costs within acceptable limits. Its chief value is not in the specific cost determination but in the analytic methods which can assist PSROs in implementing a sound, cost-effective review plan.

III. Scope and Limitations

OPPSRO staff analyzed the review costs of delegated hospitals (Part IV, HCFA form 153), nondelegated costs incurred by the PSRO (Part II, HCFA form 151), and PSRO areawide costs (Part III, HCFA form 151). Data from HCFA form 153 represent estimated 1978-1979 delegated review costs. Data from HCFA form 151 represent actual 7/1/77 - 6/30/78 review costs. PSRO managerial costs (Part I) were not considered.

In the analysis of delegated hospital costs, data limitations affected the sample in several ways. For example, no delegated hospitals were included from HEW Regions VI or VIII, and there was limited representation from Regions IV and X. While these data may have been available, they were inaccessible at the time. In addition, the small number of 153s from hospitals admitting more than 10,000 Federal patients limited the number of hospitals of that size represented in the sample. Thus, while we initially expected to have 20 hospitals in each sample size group, there were considerably less than 20 in the group of largest hospitals. In that part of the study dealing with Part II and III PSRO costs, the selected PSROs were generally three or four years old and 100% implemented.

Finally, no claim is made regarding the statistical representation of the samples used. However, hospitals and PSROs of differing sizes and geographic locations were used in order to present as comprehensive a picture of review costs as possible.

The present paper deals with a limited number of cost components for each type of review. The emphasis on only certain cost elements is not meant to imply that the elements omitted from analysis are negligible in an absolute sense. Study topics were selected on a relative basis; selected cost elements generally represent or have been considered to represent the major factors in total review costs.

It should be noted that while some cost elements (e.g., physician advisor costs, training costs) are generally minor in relation to total costs, these same elements may be of considerable consequence in certain PSROs and/or delegated hospitals. While it may not be necessary to do elaborate analysis with these less costly elements, it is important to look at them to insure that they are within expectations. For example, most travel costs were similar. However, examination found one delegated hospital in an urban PSRO area that filed \$3,000 in travel expenses. PSROs and regional offices should be careful to "flag" instances where costs are significantly different from other hospitals or other PSROs. In addition, even in a situation where these costs are seemingly insignificant, when they are considered all together, their sum may be noteworthy.

A more important cost element, fringe benefits for review coordinators and technical/support personnel, was not included in the analysis of review coordination unit cost and technical/support personnel unit cost because it was difficult to determine from the cost data collection forms (HCFA 151 and 153) what portion of the fringe benefits cost should be apportioned to the review coordinators and what portion to technical/support staff. However, fringe benefit costs are included in the calculation of total concurrent review and MCEs unit costs. PSROs and delegated hospitals can and should consider the cost of employee fringe benefits in determining the unit cost of needed personnel and establishing focused review systems or in other measures designed to cut costs. PSROs and delegated hospitals should utilize the costs of fringe benefits in calculating the unit cost of personnel elements.

IV. Analysis Techniques

A variety of basic techniques was used in examining PSRO review costs and constructing the model. These techniques include the use of a common unit of comparison, unit cost, apportionment, rank order, and some measures of central tendency--range, mean, median, and mode.

A. Use of a Common Unit of Comparison

The use of a common unit of comparison was found to be the most important factor in carrying out the analysis. Defining a base or common denominator from which comparisons could be made was instrumental in obtaining meaningful measures of the appropriateness of costs.

Preliminary analysis of data at the PSRO level revealed difficulty in examining aggregate information concerning the cost of review of Federal patients. Instead, hospital level data appeared to be a more appropriate base from which to examine costs.

Hospital workload (i.e., the number of Federal admissions) provided the unit of comparison for delegated hospital review. Thus, delegated hospitals were considered equivalent based on similar numbers of Federal admissions and were grouped accordingly. However, it must be noted that while two hospitals can be equivalent based on numbers of Federal admissions, they may be very different in regard to other factors such as number of beds, number of total (Federal and nonfederal) admissions, or location (rural, suburban, or urban setting). Federal patient workload also provided the unit of comparison for the analysis of nondelegated review.

For the analysis of areawide (monitoring) costs, common units of comparison included the number of Federal discharges, the number of delegated discharges (i.e., the number of Federal discharges from delegated hospitals), and the number of delegated hospitals.

B. Grouping According to the Unit of Comparison

The selection of delegated hospital size categories based on the number of Federal admissions:

- o reflects intervals within which an adequate number of hospitals would fall;
- o reflects representation of a wide range of hospital sizes; and
- o forms internally homogeneous and, simultaneously, externally distinct groups.

Six size categories were chosen, and each category included hospitals with annual Federal admissions within an interval of 300 (i.e., ± 150):

- Group A: Small hospitals (under 1,000 Federal admissions)
- Group B: Circa 1,000 (i.e., $1,000 \pm 150$; or 850 to 1,150) Federal admissions
- Group C: Circa 2,500 (i.e., $2,500 \pm 150$; or 2,350 to 2,650) Federal admissions
- Group D: Circa 4,000 (i.e., $4,000 \pm 150$; or 3,850 to 4,150) Federal admissions

Group E: Circa 6,000 (i.e., $6,000 \pm 150$; or 5,850 to 6,150) Federal admissions

Group F: Circa 10,000 (i.e., $10,000 \pm 150$; or 9,850 to 10,150) Federal admissions.

A total of 128 hospitals from 106 PSROs was included in the examination of delegated hospital costs. Group A consisted of 26 delegated hospitals; Group B, 28; Group C, 21; Group D, 19; Group E, 21; and Group F, 13.

Each hospital was numbered to provide it with a unique code (e.g., A2 is no. 2 of group A; E19 is no. 19 of group E) for working and manipulative purposes. The codes used for hospitals and PSROs are in no way related to any PSRO program codes. Virtually all the hospitals in the sample groups A-D fell within the chosen numerical intervals, yet less than 20% in groups E and F did so. Thus, the criteria for groups E and F had to be made more flexible in order to include more hospitals in these groupings. This phenomenon seems related to the existence of a fewer number of larger hospitals nationally.

Because nondelegated review costs are reported by PSRO, the analysis of nondelegated costs did not utilize the technique of grouping nondelegated hospitals into categories as was done with delegated hospitals. Instead, nondelegated review costs were examined by PSRO.

All available HCFA 153 forms (rendering estimated 1978-79 information) were examined in order to select delegated hospitals for each size group. A hospital was not included unless the number of Federal admissions and relevant cost data were included on its submitted form 153. In addition, hospitals were chosen so as to include a diverse group of PSROs from different geographic regions. Similarly, in selecting PSROs for the analysis of nondelegated and areawide review costs, an attempt was made to include PSROs from different geographic areas and rural/urban/suburban environments. In addition, PSROs with various mixes of delegated and nondelegated hospitals were chosen.

In order for this method of examination to be maximally useful, delegated hospitals within a region, sub-region, PSRO area, etc. can also be grouped by workload (i.e., Federal admissions). However, the size of the intervals into which sample hospitals are categorized will have to be chosen somewhat differently in each case. In addition, the size of each sample will necessarily differ; optimally, where possible, all hospitals/PSROs should be used.

C. Use of Unit Cost

Using unit cost rather than total cost for comparing/analyzing data is useful because comparing only total costs may lead to erroneous conclusions. Using unit cost takes into account total Federal admissions/discharges over which total costs are distributed.

For example, consider two delegated hospitals:

	Total Review Costs	Number of Federal Admissions
Hospital A	\$ 40,000	4,000
Hospital B	\$ 7,500	750

Hospital A's review costs appear high while those of hospital B appear moderate, yet on a unit cost basis both hospitals have the same review costs:

	Unit Cost
Hospital A	$\frac{\$40,000}{4,000} = \$10 \text{ per Federal Admission}$
Hospital B	$\frac{\$ 7,500}{750} = \$10 \text{ per Federal Admission}$

D. Apportionment

Apportioning reported cost figures is necessary in order to obtain truly accurate data. It was necessary to apportion in order to analyze both delegated and nondelegated review costs. For the analysis of delegated review costs, it was necessary to apportion in order to identify review costs for Federal patients in delegated hospitals with Federal and non-federal combined review programs.

Example (Refer to sample HCFA 153 form - page 8)

In cases where the "Scope of Review" on the HCFA 153 is marked "Federal and Nonfederal Combined Review Program," review costs must be apportioned among Federal and nonfederal patients. The method for apportioning costs is shown below. For any information desired for Federal admissions, multiply the appropriate figure from form 153 by the figure obtained in step 2 below. This product reflects the Federal portion of combined Federal and nonfederal review costs.

Step 1--Find the total number of admissions by adding the number of Federal and nonfederal admissions.

Step 2--Divide the number of Federal admissions by the number of total admissions to obtain a figure.

Step 3--Multiply the appropriate figure from form 153 by the figure obtained in step 2 above.

For instance, to calculate the cost of review coordinators for concurrent review since the "Scope of Review" section specifies this sample hospital has a "Federal and Nonfederal Combined Review Program":

Step 1--a) Title XVIII + Title XIX + Title V admissions

$$\begin{aligned} &= 1,490 + 6,535 + 0 \\ &= 8,025 \text{ Federal admissions} \end{aligned}$$

b) Federal + nonfederal admissions

$$\begin{aligned} &= 8,025 + 4,046 \\ &= 12,071 \text{ (total admissions)} \end{aligned}$$

Step 2--Federal admissions $\div$ total admissions

$$\begin{aligned} &= \frac{8,025}{12,071} \\ &= .6648165 \end{aligned}$$

Step 3--Cost of review coordinators for concurrent review (col 3, line 4) is \$94,032. However, this cost is for the review of the total admissions.

Thus, $.6648165 \times \$94,032 = \$62,514.025$ or, rounding, \$62,514. Consequently, \$62,514 is the cost of review coordinators for concurrent review of only Federal admissions.

In the analysis of both delegated and nondelegated review costs, it is necessary to apportion in order to identify the number of full-time equivalent (FTE) review coordinators corresponding to concurrent review. An example of this calculation can be found on page 19.

In analyzing areawide costs (Part III), it is necessary to apportion the review coordinator FTEs in order to identify what portion of the total review coordinator staff is employed in the performance of area-wide review activities.

DELEGATED HOSPITAL FUNCTION COST SUMMARY

OMB Approval No. 66-R-0097
Approval Expires 12/81

1. Provider Name: _____

2. Medicare Provider Number ☐ ☐ ☐ ☐ ☐ ☐

3. Check if Hospital Reimb. by PSRO ☐

4. PSRO Name: _____

5. PSRO Number: _____

6. Delegation Status:

- a. ☒ Fully Delegated (CR and MCEs)
b. ☐ Delegated CR only
c. ☐ Delegated MCEs only
d. ☐ Delegated MCEs and Partially CR
Delegated Partial CR only:
e. ☐ Physician Advisor
f. ☐ Review Coordinator

7. Scope of Review:

- a. ☐ Federal Only
b. ☒ Federal and Nonfederal Combined
Review Program
c. ☐ Federal and Nonfederal
Separate Review Program

8. Reporting Period:

From: July 1, 1978

To: June 30, 1979

9. ADMISSIONS			
Category	(1) Acute	(2) SNF	(3) ICF
a Title XVIII			1,490
b Title XIX			6,535
c Title V			4,046
d Nonfederal			12,071
e Totals			

10. If Modified Review
(describe briefly)

11. Type of Submission (check one)

- a. ☒ Estimated
b. ☐ Actual
c. ☐ Reconciled

12. COST COMPONENTS	FEDERAL OR COMBINED PROGRAM Round to Nearest Dollar						NONFEDERAL ONLY		
	FUNCTIONS								
	FTE's No.	Hours	Adm. Cert./ Cont. Stay Conc. Review \$	Medical Care Eval. Studies \$	Other Review \$	Total \$	FTE's No.	Hours	Total Other Review \$
	1	2	3	4	5	6	7		
a. Physicians		60		2,640		2,640			
b. Physician Advisors		153	6,737			6,737			
c. Other Health Care Prof.	.029	64	364	264		628			
d. Review Coordinators	5.75		94,032	4,596		98,628			
e. Technical Support	5.0		42,421	6,522		48,943			
f. Fringe Benefits			28,473	2,320		30,793			
g. Training			200	250		450			
h. Travel			200	125		325			
TOTAL			172,427	16,717		189,144			

13. Cost Per Admission Certification/
Continued Stay Concurrent Review

\$

14. TOTAL COST PER ADMISSION

\$ 15.67

15.

Administrator

Date

16.

PSRO Executive Director

Date

HCFA 153 8/79

This report is required by law (Section 1155 (f)(3), P.L. 92-603).
Failure to report may constitute to denial of PSRO contract/grant renewal.

E. Use of Rank Order

Arranging unit costs in order from high to low enables data to be more easily examined for comparison and contrast. Ideally, it is important that only commensurate data be ranked together and compared/contrasted. For example, caution should be exercised in ranking delegated hospital concurrent review physician advisor unit costs with the unit costs of physicians in areawide review. If total sample subgroups are utilized in examining data, it is helpful to rank order unit costs both within subgroups and within the entire sample of delegated hospitals/PSROs.

F. Use of Measures of Central Tendency: Range, Mean, Median, and Mode

Using some of the basic statistical measures of central tendency is extremely helpful in examining unit costs of groups of PSROs/delegated hospitals. A brief review on calculating measures of central tendency follows:

1. Range

The range of a group of quantities is the difference between the highest quantity (the high) and the lowest quantity (the low). The range is usually not an ideal statistic for critical evaluation of very large samples because the range is influenced by extreme values. However, sometimes use of the range is very helpful. For example, it is often satisfactory for examining samples of less than ten. To find the range of a group of unit costs:

Step 1--Determine the highest and the lowest unit costs. If the unit costs are rank ordered, the high and low are clearly evident.

Step 2--Subtract the low from the high. The difference is the range.

2. Mean

A mean is merely an arithmetic average. It is the most commonly used and, in many cases, the "best" measure of central tendency. Some sets of unit costs contain costs that are atypically high or low. In such cases, the mean, which is affected by all extremes, is not the most informative measure. To find the mean of a group of unit costs:

Step 1--Find the sum of all the unit costs in the group.

Step 2--Divide the sum (figure obtained in step 1) by the number of unit costs in the group. The figure obtained is the mean.

In situations where there are one or two numbers that are significantly higher or lower than the others, it may also be advisable to compute a mean excluding these "outlier" figures.

3. Median

A median is the midpoint of a group of rank ordered quantities. When data are distributed somewhat evenly, the mean and median will be nearly equal. Thus, the mean and median of a group of unit costs should be compared. The method of finding a median of a group of unit costs differs depending on whether there is an odd or an even number of unit costs in the group.

To find the median of a group of unit costs if there is an odd number of unit costs in the group:

Step 1--Rank order the unit costs from high to low.

Step 2--Determine the unit cost which is the midpoint of the group.
This unit cost is the median.

Example

Find the median of the following PSRO concurrent review travel costs: \$.15, \$.13, \$.90, \$.25, \$1.78, \$.13, \$.03

There is an odd number of unit costs.

Step 1--Rank order the unit costs from high to low.

(1)	\$1.78
(2)	.90
(3)	.25
(4)	.15
(5)	.13
(6)	.13
(7)	.03

Step 2--Determine the unit cost which is the midpoint of the group.
The median is \$.15.

To find the median of a group of unit costs if there is an even number of unit costs in the group:

Step 1--Rank order the unit costs from high to low.

Step 2--Determine the two unit costs (considered as one point) which are the midpoint of the group.

Step 3--Find the average of the two unit costs identified in step 2.
This average is the median.

Example

Find the median of the following PSRO concurrent review costs: \$12.00, \$6.58, \$6.75, \$3.25, \$4.15, \$5.50, \$12.00, \$4.00

There is an even number of unit costs.

Step 1--Rank order the unit costs from high to low.

(1)	\$12.00
(2)	12.00
(3)	6.75
(4)	6.58
(5)	5.50
(6)	4.15
(7)	4.00
(8)	3.25

Step 2--Determine the two unit costs (considered as one point) which are the midpoint of the group. These costs are \$6.58 and \$5.50.

Step 3--Find the average of the two unit costs identified in step 2.
Thus, find the average of \$6.58 and \$5.50.

$$\$6.58 + \$5.50 = \$12.08$$

$$\frac{\$12.08}{2} = \$6.04$$

Therefore, \$6.04 is the median.

4. Mode

The mode is the most frequently occurring value in a group of data. Usually, in smaller samples, the mode will have little value in evaluating data.

To find the mode of a group of unit costs:

Step 1--Arrange the unit costs in rank order from high to low.

Step 2--Examine the unit costs to determine the most frequently occurring cost. If there are two sets of unit costs which are equally represented in the group, the data are said to be bimodal; if three sets, trimodal, etc.

V. Format of Analysis

The analysis is divided into: a) delegated, b) nondelegated, and c) areawide review costs. The delegated review cost analysis centers on concurrent review and its major components, review coordinator and technical/support costs, and on MCE costs per patient and per study. A similar analysis follows on nondelegated review costs. The analysis of areawide costs concentrates on monitoring and data activities.

Information is presented in the following format:

1. Tables Presenting Data by Topic
2. Rationale
3. Purpose of the Table
4. Data Source
5. Method of Calculation
6. Purpose of Calculation (when necessary)
7. Analysis of Data (Indications)

For purposes of this analysis the terms "admissions" and "discharges" refer to the numbers shown on the HCFA 153 and 121 respectively. When used in the context of review workload or productivity, the terms are referring to both components of concurrent review (i.e., admission and continued stay review).

VI. Delegated Review Costs

Table I - Range of Delegated Hospital Review Unit Costs by Hospital Size

Rationale

Because of the wide variation in both PSRO and delegated hospital review costs, delegated hospital review costs were examined at the hospital level with hospitals being grouped according to Federal admissions. Even within these six groups, a wide range of review costs is evident. It is apparent that in most of the hospitals whose costs were examined, concurrent review is the greater expense of total hospital delegated review.

Purpose of the Table

To provide an overview of delegated hospital review unit cost by hospital size. Review costs (total, concurrent review, MCEs) by hospital size can be contrasted/compared for differences and similarities. Also, the cost relationship between concurrent review, MCEs, and total cost can be more easily identified.

Explanatory Note

The unit costs under consideration (total hospital delegated, concurrent review costs, and Medical Care Evaluation studies costs) were examined for each delegated hospital in each sample size group. However, for brevity, the unit costs of only five delegated hospitals in each sample size group are shown in Table I.

Ranking in Table I is done on the basis of "total hospital delegated review" unit costs (column 3). For each hospital size group the highest total hospital delegated review unit cost shown is the highest unit cost of all the delegated hospitals in the entire sample.

Similarly, for each sample size group the lowest total hospital review unit cost shown is the lowest unit cost of all delegated hospitals in the sample size group, not just of the five hospitals shown on the table.

The middle unit cost of each sample size group is the median unit cost of all hospitals in the group.

Example

For all the delegated hospitals in sample group B, \$16.44 is the highest "total hospital delegated review" unit cost, and \$4.72 is the lowest unit cost. The median unit cost of all the delegated hospitals in sample group B is \$9.49.

Data Source

HCFA 153

Table I
Range of Delegated Hospital Review Unit Costs* By Hospital Size

PSRO	Hospital	Unit Costs		Medical Care Evaluation Studies
		Total Hospital Delegated Review	Concurrent Review	
Group A (under 1,000)				
1	A1	\$ 32.53	\$ 19.02	\$ 13.50
2	A23	23.10	20.36	2.74
3	A19	11.95	8.81	3.14
4	A12	7.41	5.60	1.81
5	A8	4.74	3.64	1.10
Group B (circa 1,000)				
1	B26	16.44	11.99	4.45
2	B10	12.01	11.30	.71
3	B5	9.49	9.01	.48
4	B7	6.88	5.86	1.02
5	B22	4.72	3.78	.94
Group C (circa 2,500)				
1	C14	17.39	14.60	2.79
2	C1	12.74	11.40	1.34
3	C11	10.46	9.09	1.36
4	C8	7.02	6.38	.64
5	C13	6.03	5.85	.18
Group D (circa 4,000)				
1	D7	26.74	20.49	6.26
2	D5	19.03	17.14	1.88
3	D2	10.59	9.72	.87
4	D18	4.63	2.75	1.87
5	D14	2.71	2.56	.43
Group E (circa 6,000)				
1	E7	20.94	9.02	11.91
2	E3	16.47	13.46	3.01
3	E6	10.52	9.26	1.25
4	E8	6.91	6.61	.30
5	E20	3.68	3.24	.44
Group F (circa 10,000)				
1	F2	18.34	10.09	8.25
2	F7	12.92	12.02	.91
3	F13	12.40	11.19	1.21
4	F5	7.33	6.49	.84
5	F10	6.97	6.90	.06

*unit cost = $\frac{\text{total cost}}{\text{number of Federal patients}}$

Purpose: To provide high, low, and median for each sample group

Table I (Continued)

Method of Calculation

total hospital delegated review unit cost	= $\frac{\text{total hospital delegated review cost}}{\text{number of Federal admissions}}$
concurrent review unit cost	= $\frac{\text{total concurrent review cost}}{\text{number of Federal admissions}}$
MCEs unit cost	= $\frac{\text{total cost of MCEs}}{\text{number of Federal admissions}}$

Analysis of Data (Indications)

- o Unit cost variations exist despite similar hospital review workloads.
- o Concurrent review is usually the greater expense.
- o MCEs generally represent 10%-15% of total review costs.
- o Delegated hospital review needs to come in at less than \$8.70 to allow for Part III costs.

Table II - Major (Unit) Component Costs of Hospital Delegated
Concurrent Review in Relationship to Total Hospital
(Unit) Cost by Hospital Size

Rationale

As exhibited in Table I, concurrent review costs generally represent the major expense of delegated hospital review, and MCE costs usually represent a lesser expense. Therefore, the component costs of concurrent review were examined in order to determine the significance of each.

Analysis revealed that the review coordinator and technical/support costs represent the major expenses of concurrent review with other cost components usually representing only minor expenses.

Review coordinator and technical/support costs were examined separately for each of the six sample size hospital groups. However, only group C (circa 2,500 Federal admissions) is shown here.

Purpose of the Table

To allow an examination (by hospital size) of the variance and similarities existing among unit costs of concurrent review and review coordinator and technical/support costs within concurrent review.

Data Source

HCFA 153

Method of Calculation

For concurrent review;

review coordinator
unit cost = $\frac{\text{total review coordinator cost}}{\text{number of Federal admissions}}$

technical/support
unit cost = $\frac{\text{total technical/support cost}}{\text{number of Federal admissions}}$

review coordinator &
technical/support
unit cost = $\frac{\text{review coordinator [total cost]} + \text{technical/support [total cost]}}{\text{number of Federal admissions}}$

concurrent review
unit cost = $\frac{\text{total concurrent review cost}}{\text{number of Federal admissions}}$

total hospital
review unit cost = $\frac{\text{total hospital review cost}}{\text{number of Federal admissions}}$

Table II

Major (Unit) Component Costs of Hospital Delegated
Concurrent Review in Relationship to
Hospital (Unit) Cost by Hospital Size

Group C (circa 2,500)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
PSRO	Hospital	Review Coordinator (Unit)	Technical/ Support (Unit)	Review Coordinator & Technical/Support (Unit)	Concurrent Review (Unit)	Total Hospital (Unit)
1	C14	\$ 10.19	\$ 1.57	\$ 11.76	\$ 14.60	\$ 17.39
2	C20	8.48	2.28	10.76	15.12	15.61
3	C19	7.17	4.28	11.46*	14.56	15.59
4	C3	9.51	0	9.51	13.05	13.26
5	C1	6.19	.16	6.36*	11.40	12.74
6	C12	8.25	0	8.25	11.27	12.43
7	C22	5.98	1.45	7.44*	10.20	11.64
8	C10	3.38	.97	4.36*	5.04	10.92
9	C2	7.32	0	7.32	10.26	10.70
10	C5	6.04	1.30	7.35*	10.28	10.67
11	C11	5.45	2.57	8.02	9.09	10.46
12	C7	3.08	1.99	5.08*	6.99	10.36
13	C9	3.56	2.08	5.65*	9.37	10.01
14	C15	4.84	1.17	6.01	8.39	9.91
15	C21	4.67	1.69	6.36	8.08	9.46
16	C17	3.78	.61	4.40*	7.62	7.94
17	C4	2.74	1.05	3.79	6.17	7.59
18	C8	5.08	0	5.08	6.38	7.02
19	C16	3.22	1.29	4.51	6.19	6.65
20	C18	4.33	0	4.33	6.21	6.53
21	C13	4.77	0	4.77	5.85	6.03

¹ In some cases, the sums of the figures in columns three and four do not equal the figures in column five because of rounding in calculations. These cases are denoted by asterisks beside column five figures.

Table II (Continued)

Analysis of Data (Indications)

- o Review coordinator costs are usually the greatest cost element in concurrent review.
- o Technical/support costs vary from the high of \$4.28 to the low of \$0.
- o Having zero expenditures for technical/support indicates instances where the review coordinator may be performing the abstracting.
- o It is generally inefficient to use a trained health practitioner to perform a clerical function. Alternatives to this practice should be explored.
- o Some physician advisor time is "free."
- o In hospitals where the sum of review coordinator and technical/support equals more than \$5.00, the total unit concurrent review cost often equals more than \$8.00.
- o It is necessary to examine both the review coordinator and technical/support costs very closely.

Table III - Examination of Review Coordinator Annual Productivity
by Hospital Size

Rationale

Because the unit cost of review coordinators represents the major portion of concurrent review expense, review coordinator productivity (i.e., workload per FTE review coordinator) was examined. This examination was performed to discern similarities and/or differences among delegated hospitals within the same and different sample groups and to account for existing differences in review coordinator unit cost.

Purpose of the Table

To compare and contrast, by means of high-to-low rank orderings, the annual review coordinator productivity levels by hospital sample size group.

Data Source

HCFA 153

Method of Calculation

In order to obtain the annual productivity of one FTE review coordinator used in concurrent review, it is necessary to apportion the total review coordinator FTEs employed between the number of review coordinator FTEs employed in concurrent review and those employed in MCEs or in other review.

The apportionment of review coordinator FTEs is done on the basis of cost--the cost of review coordinators in concurrent review as opposed to the total cost of all review coordinators employed.

Part I. To obtain the review coordinator FTE for concurrent review:

Step 1--Divide the cost of all review coordinators used in concurrent review by the total cost of all review coordinators employed.

Step 2--Multiply the figure obtained in step 1 by the total number of review coordinator FTEs employed. This figure is the review coordinator FTE used in concurrent review.

Table III
Examination of Review Coordinator Annual Productivity*
by Hospital Size

Hospital Size:	(<1,000) Group A	(circa 1,000) Group B	(circa 2,500) Group C	(circa 4,000) Group D	(circa 6,000) Group E	(circa 10,000) Group F
	5895	5802	3762	12691	6438	4150
	4620	3462	3568	6554	4770	4075
	4230	3170	3250	3007	4620	3902
	3360	3093	2932	2970	4264	3163
	2880	3088	2913	2917	4160	3060
	2088	2761	2898	2810	4070	2827
	2000	2655	2837	2523	3301	2573
	2000	2597	2782	2275	3093	2442
	1670	2590	2605	2162	3090	2399
	1566	2436	2563	2128	3064	2300
	1564	2400	2071	2026	3000	2168
	1504	2400	1999	1954	2825	2157
	1376	2316	1740	1949	2567	1846
	1120	2274	1733	1798	2544	
	1110	2146	1666	1796	2187	
	1096	2028	1625	1332	2122	
	1031	1980	1325	1312	1811	
	1024	1860	1317		1615	
	1020	1858	1309		1530	
	969	1818	1191		1446	
	873	1755	1184			
	670	1737				
	561	1599				
	365	1573				
	128	1571				
		1557				
		1299				
		1144				

* Productivity = $\frac{\text{number of Federal patients}}{\text{number of full-time equivalent review coordinators}}$

Table III (Continued)

Example (of Part I) of apportionment calculation (from sample HCFA 153, P.22).

Step 1--a) Cost of review coordinators used in concurrent review is \$9,454.

b) Total cost of all review coordinators employed is \$10,342.

$$\text{Thus, } \frac{\$ 9454}{\$10342} = .9141365$$

Step 2--Total number of FTE review coordinators employed is two.

$$2 \times (.9141365) = 1.828273 \text{ or, rounding, } 1.83$$

Therefore, 1.83 FTE review coordinators are used to do concurrent review.

Part II. Annual productivity** of one FTE review coordinator used in concurrent review = $\frac{\text{annual number of Federal admissions}}{\text{number of FTE review coordinators used in concurrent review}}$

** This annual productivity is, of course, an "average" productivity. Individual review coordinators within a hospital may have higher or lower productivity levels than the average figure. However, such variations from the average will most likely not be extreme.

Example (of Part II) (from sample HCFA 153, p.22).

Number of Federal admissions is 2,650.

$$\frac{\text{number of Federal admissions}}{\text{number of FTE review coordinators used in concurrent review}} = \frac{2650}{1.83} = 1448.0874 \text{ or, rounding, } 1448$$

Annual productivity of one FTE review coordinator for concurrent review is 1,448 (admissions) in this delegated hospital.

Analysis of Data (Indications)

- o There exists considerable overall variation in review coordinator productivity levels.
- o A significant number of productivity levels exceeded the earlier expectation of 1,800-3,000 admissions (Transmittal No. 46, p.15).
- o Hospitals with less than 1,000 Federal admissions often have problems with maintaining reasonable productivity.

DELEGATED HOSPITAL FUNCTION COST SUMMARY

OMB Approval No. 66-R-0097
Approval Expires 12/81

1. Provider Name: _____
2. Medicare Provider Number ☐ ☐ ☐ ☐ ☐ ☐
3. Check if Hospital Reimb. by PSRO ☐
4. PSRO Name: _____
5. PSRO Number: _____

6. Delegation Status:
- a. ☒ Fully Delegated (CR and MCEs)
- b. ☐ Delegated CR only
- c. ☐ Delegated MCEs only
- d. ☐ Delegated MCEs and Partially CR
Delegated Partial CR only:
- e. ☐ Physician Advisor
- f. ☐ Review Coordinator

7. Scope of Review:
- a. ☐ Federal Only
- b. ☐ Federal and Nonfederal Combined
- c. ☒ Review Program
- d. ☐ Federal and Nonfederal
Separate Review Program

8. Reporting Period:

From: July 1, 1978

To: June 30, 1979

9. ADMISSIONS				
Category	(1) Acute	(2) SNF	(3) ICF	(4) Totals
a Title XVIII				1,675
b Title XIX				975
c Title V				-0-
d Nonfederal				4,710
e Totals				7,360

10. If Modified Review
(describe briefly)

11. Type of Submission (check one)

- a. ☒ Estimated
- b. ☐ Actual
- c. ☐ Reconciled

12. COST COMPONENTS	FEDERAL OR COMBINED PROGRAM Round to Nearest Dollar FUNCTIONS						NONFEDERAL ONLY		
	FTE's No.	Hours	Adm. Cert./ Cont. Stay Conc. Review \$	Medical Care Eval. Studies \$	Other Review \$	Total \$	FTE's No.	Hours	Total Other Review \$
	1	2	3	4	5	6	7		
a. Physicians		64		508	508				
b. Physician Advisors		286	6,303	-0-	6,303				
c. Other Health Care Prof.			-0-	-0-	-0-				
d. Review Coordinators	2.0		9,454	888	10,342				
e. Technical Support	1.0		5,522	-0-	5,522				
f. Fringe Benefits			3,444	204	3,648				
g. Training			50	50	100				
h. Travel			50	50	100				
TOTAL			24,823	1,700	26,523				

13. Cost Per Admission Certification/
Continued Stay Concurrent Review

\$

14. TOTAL COST PER ADMISSION

\$ 10.01

15. Administrator

Date

16. PSRO Executive Director

Date

HCFA 153 8/79

This report is required by law (Section 1155 (d) (1), P.L. 92-603).
Failure to report may constitute a denial of PSRO contractant renewal.

Table IV - Unit Cost per Patient as a Factor of Review Coordinator Salary Level and Productivity (Delegated Concurrent Review)

Rationale

Analysis of data shows that generally when the unit cost of concurrent review is greater than \$5.00, the unit cost of total hospital delegated review tends to be greater than \$8.00. Thus, because the unit cost of review coordinators is the major expense of concurrent review, and because of the wide variance of review coordinator productivity, review coordinator unit cost was examined as a function of both the review coordinator salary and productivity levels.

On closer examination of all the data, those delegated hospitals which incurred concurrent review costs in the \$5.00 range had expended a unit cost of approximately \$3.00 for review coordinators. It was as a result of these observations of PSROs' and delegated hospitals' actual review expenditures that a \$3.00 unit cost target for review coordinators was selected. It was with the selection of the \$3.00 target that the development of a model began. References to target unit costs refer to further delineation of the model.

Purpose of the Table

To illustrate the way in which the unit cost for review coordinator concurrent review activities is affected by review coordinator productivity and salary level (based on 248 working days per year and 100% review). For example, in order for the unit cost of review coordinator concurrent review activities to equal \$3.00, the review coordinator paid \$12,000 per year will have to review 4,000 admissions per year; at \$15,000, 5,000 per year; at \$18,000, 6,000 per year.

Data Source

HCFA 153

Table IV

Unit Cost Per Patient as a Factor of Review Coordinator
Salary Level and Productivity
(Delegated Concurrent Review)

Purpose: This table shows how review coordinator productivity and salary level affect unit cost.

Productivity		Unit Cost at \$12,000 Salary	Unit Cost at \$15,000 Salary	Unit Cost at \$18,000 Salary
Per Year	Per Day			
1500	6.0	\$ 8.00	\$ 10.00	\$ 12.00
2000	8.1	6.00	7.50	9.00
2500	10.1	4.80	6.00	7.20
3000	12.1	4.00	5.00	6.00
3500	14.1	3.42	4.28	5.14
4000	16.1	3.00	3.75	4.50
4500	18.1	2.66	3.33	4.00
5000	20.1	2.40	3.00	3.60
5500	22.2	2.18	2.72	3.27
6000	24.2	2.00	2.50	3.00

Line demarks the productivity and/or salary levels needed to achieve the target review coordinator unit cost of \$3.00.

Table IV (Continued)

Method of Calculation

Part I. Productivity

$$\begin{array}{l} \text{review coordinator} \\ \text{productivity} \\ \text{(per day)} \end{array} = \frac{\text{annual productivity}}{248 \text{ days}} \quad \begin{array}{l} \text{(see Part II, method of} \\ \text{Table III, p.21)} \end{array}$$

Part II. Annual Salary Level

Annual salary level is the annual salary actually paid to one FTE review coordinator doing concurrent review. If more than one person is employed and if they receive different pay rates based on experience, full-time vs. part-time status, etc., then the annual salary level found will be an average figure based on a theoretical average FTE. For purposes of this analysis, fringe benefits are included as a part of total annual salary.

Find the annual salary level of one FTE review coordinator used in concurrent review:

$$\begin{array}{l} \text{annual salary of one FTE} \\ \text{review coordinator used in} \\ \text{concurrent review} \end{array} = \frac{\begin{array}{l} \text{total cost of review coordinators used} \\ \text{in concurrent review} \\ \text{number of review coordinator FTEs used} \\ \text{in concurrent review (step 2, Part I,} \\ \text{method of Table III, p.19)} \end{array}}$$

Part III. Unit cost (at 100% review)

$$\begin{array}{l} \text{(concurrent review) review} \\ \text{coordinator unit cost} \end{array} = \frac{\text{total cost of review coordinators}}{\text{number of Federal admissions}}$$

Table IV (Continued)

Example (from sample HCFA 153, p.27)

Part I. Productivity

In order to find the review coordinator productivity per day, the annual productivity must first be identified.

From Part I, method of Table III, page 19, first find the review coordinator FTEs employed in concurrent review. In this case, there are no MCE or "other" review costs shown for review coordinators. Thus, the entire cost for review coordinators is for concurrent review. Similarly, all 2.22 review coordinator FTEs are utilized in concurrent review.

Consequently, it is not necessary to prorate the review coordinator costs and FTEs between concurrent review and MCEs (or other review).

Therefore, the review coordinator FTE used in concurrent review is 2.22.

From method of Table III, Part II, page 21

$$\begin{aligned}
 &\text{annual productivity of} && \text{annual number of Federal admissions} \\
 &\text{one FTE review coordinator} &= & \text{number of FTE review coordinators} \\
 &\text{used in concurrent review} && \text{used in concurrent review} \\
 & &= & \frac{2750}{2.22} \\
 & &= & 1238.7387 \text{ or, rounding, } 1239
 \end{aligned}$$

From method of Table IV, Part I, page 25

$$\begin{aligned}
 &\text{review coordinator} &= & \frac{\text{annual productivity}}{248 \text{ days}} \\
 &\text{productivity (per day)} &= & \frac{1239}{248} \\
 & &= & 4.9959677 \text{ or, rounding, } 5 \text{ (discharges per day)}
 \end{aligned}$$

From method of Table IV, Part II, page 25

$$\begin{aligned}
 &\text{annual salary level of one} && \text{total cost of review coordinators used} \\
 &\text{FTE review coordinator used} &= & \frac{\text{in concurrent review}}{\text{number of review coordinators FTEs used}} \\
 &\text{in concurrent review} && \text{in concurrent review} \\
 & &= & \frac{\$33000}{2.22} \\
 & &= & \$14864.864 \text{ or, rounding, } \$14865
 \end{aligned}$$

DELEGATED HOSPITAL FUNCTION COST SUMMARY

OMB Approval No. 66-R-0097
Approval Expires 12/81

1. Provider Name: _____
2. Medicare Provider Number ☐ ☐ - ☐ ☐ ☐ ☐
3. Check if Hospital Reimb. by PSRO ☐
4. PSRO Name: _____
5. PSRO Number: _____

6. Delegation Status:
- a. ☒ Fully Delegated (CR and MCEs)
- b. ☐ Delegated CR only
- c. ☐ Delegated MCEs only
- d. ☐ Delegated MCEs and Partially CR
Delegated Partial CR only:
- e. ☐ Physician Advisor
- f. ☐ Review Coordinator

7. Scope of Review:
- a. ☒ Federal Only
- b. ☐ Federal and Nonfederal Combined
Review Program
- c. ☐ Federal and Nonfederal
Separate Review Program

8. Reporting Period:

From:

To:

ADMISSIONS			
Category	(1) Acute	(2) SNF	(3) ICF
a Title XVIII	3,200		
b Title XIX	500		
c Title V	50		
d Nonfederal	8,000		
e Totals	10,750		

10. If Modified Review
(describe briefly)

11. Type of Submission (check one)

- a. ☒ Estimated
- b. ☐ Actual
- c. ☐ Reconciled

12. COST COMPONENTS	FEDERAL OR COMBINED PROGRAM Round to Nearest Dollar						NONFEDERAL ONLY		
	FUNCTIONS								
	FTE's No.	Hours	Adm. Cert./ Cont. Stay Conc. Review \$	Medical Care Eval. Studies \$	Other Review \$	Total \$	FTE's No.	Hours	Total Other Review \$
	1	2	3	4	5	6	7		
a. Physicians		15	—	500	—	500			
b. Physician Advisors		—	—	—	—	—			
c. Other Health Care Prof.	—	—	—	—	—	—			
d. Review Coordinators	2.22		33,000	—	—	33,000			
e. Technical Support	1.50		10,000	2,000	—	12,000			
f. Fringe Benefits			2,000	—	—	2,000			
g. Training			500	100	—	600			
h. Travel			200	—	—	200			
TOTAL			45,700	2,600	—	48,300			

13. Cost Per Admission Certification/
Continued Stay Concurrent Review

\$

14. TOTAL COST PER ADMISSION

\$

- 15.

Administrator

Date

- 16.

PSRO Executive Director

Date

Table IV (Continued)

From Method of Calculation of Table IV, Part III, page 25

(concurrent review)		
review coordinator	=	total cost of review coordinators used in concurrent review
unit cost		number of Federal admissions
	=	$\frac{\$33000}{2750}$
	=	\$12

Analysis of Data (Indications)

- o Achieving a set review coordinator unit cost depends on both review coordinator productivity level and salary level.
- o Performing review of an average of 12 to 16 patients per day seems to be a desirable productivity level.
- o The higher the salary level and/or the lower the productivity level, the more difficult it is to achieve a low target review coordinator unit cost in a 100% review system (i.e., without focusing).

Table V - Focused Review Costs

Rationale

It can be observed from Table IV that without unreasonably high review coordinator productivity levels, achieving review coordinator unit costs of \$3.00* will require focusing by many PSROs. Three dollars is the model's guideline review coordinator unit cost figure based on the current nationwide average total review unit cost restraint of \$8.70. Some PSROs will have to focus even more than would ordinarily be necessary to achieve a \$3.00 review coordinator unit cost, while in others a higher figure than \$3.00 might be acceptable. Increasing the productivity and decreasing the salary of review coordinators are also possible methods of reducing the review coordinator unit cost to \$3.00. However, these methods have very limited elasticity at the upper and lower limits respectively. Focusing can achieve review coordinator unit cost reductions to \$3.00 or any set level.

Purposes of the Table

- 1) To determine what measure of focusing is necessary in order to achieve a set review coordinator unit cost (for concurrent review) at given productivity and salary levels. The table emphasizes the model's unit cost guideline of \$3.00, although any other unit cost could be highlighted as well.
- 2) To determine the review coordinator unit cost at various focusing levels and at given productivity and salary levels.

Data Source

HCFA 153

Method of Calculation

Part I. To find the necessary focusing levels at given productivity and salary levels and at a set unit cost:

$$\begin{array}{lcl} \text{necessary} & & \text{Target review} \\ \text{focusing level} = & \text{coordinator} & \text{unit cost} \times \text{coordinator} \\ & \text{unit cost} & \text{productivity level} \\ & \text{annual salary level of one FTE review coordinator} & \end{array}$$

Table V
Focused Review Costs

Purpose: This table shows that without unreasonably high productivity levels, PSROs will have to focus to achieve a \$3.00 review coordinator unit cost.

Federal Patient Review Load/ Productivity One FTE Review Coordinator	\$18,000 per year % of Federal admissions reviewed concurrently			
	100%	75%	50%	25%
1,500	\$12.00	\$9.00	\$6.00	\$3.00
2,000	9.00	6.75	4.50	2.25
2,500	7.20	5.40	3.60	1.80
3,000	6.00	4.50	3.00	1.50
3,500	5.14	3.85	2.57	1.28
4,000	4.50	3.37	2.25	1.13
4,500	4.00	3.00	2.00	1.00
5,000	3.60	2.70	1.80	.90
5,500	3.27	2.45	1.64	.82
6,000	3.00	2.25	1.50	.75

Federal Patient Review Load/ Productivity One FTE Review Coordinator	\$15,000 per year % of Federal admissions reviewed concurrently			
	100%	75%	50%	25%
1,500	\$10.00	\$7.50	\$5.00	\$2.50
2,000	7.50	5.63	3.75	1.88
2,500	6.00	4.50	3.00	1.50
3,000	5.00	3.75	2.25	1.25
3,500	4.28	3.21	2.14	1.02
4,000	3.75	2.81	1.88	.94
4,500	3.33	2.50	1.67	.83
5,000	3.00	2.25	1.50	.75
5,500	2.72	2.04	1.36	.68
6,000	2.50	1.88	1.25	.63

The line denotes the model's guideline review coordinator unit cost at various productivity and focusing levels and at a given review coordinator salary level.

Table V (Continued)

Example 1 (using sample HCFA 153, p.32)

$$\text{necessary focusing level} = \frac{\text{target review coordinator unit cost} \times \text{annual review coordinator productivity level}}{\text{annual salary level of one FTE review coordinator}}$$

a) the set review coordinator unit cost is \$3.00
(the model's guideline)

b) annual review coordinator productivity level
(from the method of Table III, Part II, p. 21)

$$\begin{aligned} &= \frac{\text{number of Federal admissions}}{\text{number of FTE review coordinators used in concurrent review}} \\ &= \frac{4950}{3} \\ &= 1650 \end{aligned}$$

c) annual salary level of one FTE review coordinator
(from the method of Table IV, Part II, p. 25)

$$\begin{aligned} &= \frac{\text{total cost of review coordinators used in concurrent review}}{\text{number of review coordinator FTEs used in concurrent review}} \\ &= \frac{\$54000}{3} \\ &= \$18000 \end{aligned}$$

$$\begin{aligned} \text{Thus, necessary focusing level} &= \frac{\$3.00 \times 1650}{\$18000} \\ &= \frac{\$4950}{\$18000} \\ &= .275 \text{ or, rounding, } .28 \\ &= 28\% \text{ (i.e., 72\% of the admissions must be focused out in this delegated hospital)} \end{aligned}$$

DELEGATED HOSPITAL FUNCTION COST SUMMARY

OMB Approval No. 66-R-0097

Approval Expires 12/81

1. Provider Name: _____

2. Medicare Provider Number ☐ ☐-☐ ☐ ☐ ☐

3. Check if Hospital Reimb. by PSRO ☐

4. PSRO Name: _____

5. PSRO Number: _____

6. Delegation Status:

- a. ☐ Fully Delegated (CR and MCEs)
 b. ☐ Delegated CR only
 c. ☐ Delegated MCEs only
 d. ☐ Delegated MCEs and Partially CR
 Delegated Partial CR only:
 e. ☐ Physician Advisor
 f. ☐ Review Coordinator

7. Scope of Review:

- a. ☐ Federal Only
 b. ☐ Federal and Nonfederal Combined
 Review Program
 c. ☐ Federal and Nonfederal
 Separate Review Program

8. Reporting Period:

From:

To:

9. ADMISSIONS			
Category	(1) Acute	(2) SNF	(3) ICF
a Title XVIII	4,000		
b Title XIX	900		
c Title V	50		
d Nonfederal	5,000		
e Totals	9,950		

10. If Modified Review
(describe briefly)

11. Type of Submission (check one)

- a. ☐ Estimated
 b. ☐ Actual
 c. ☐ Reconciled

12. COST COMPONENTS	FEDERAL OR COMBINED PROGRAM Round to Nearest Dollar						NONFEDERAL ONLY		
	FUNCTIONS								
	FTE's No.	Hours	Adm. Cert./ Cont. Stay Conc. Review \$	Medical Care Eval. Studies \$	Other Review \$	Total \$	FTE's No.	Hours	Total Other Review \$
	1		2	3	4	5	6		7
a. Physicians									
b. Physician Advisors									
c. Other Health Care Prof.									
d. Review Coordinators	3		54,000	—	—	54,000			
e. Technical Support									
f. Fringe Benefits									
g. Training									
h. Travel									
TOTAL									

13. Cost Per Admission Certification/
Continued Stay Concurrent Review

\$

14. TOTAL COST PER ADMISSION

\$

15.

Administrator

Date

16.

PSRO Executive Director

Date

HCFA 153 8/79

This report is required by law (Section 1155 (i)(1), P.L. 92-603).
Failure to report may contribute to denial of PSRO contract/grant renewal.

Table V (Continued)

Example 2

Although the model's review coordinator unit cost target is \$3.00, a PSRO or delegated hospital may choose to target a different review coordinator unit cost. Hence the following example:

- a) target review coordinator unit cost is \$4.00
- b) annual review coordinator productivity level is 1,500
- c) salary level of one FTE review coordinator is \$18,000

$$\begin{aligned}
 \text{necessary focusing level} &= \frac{\text{target review coordinator unit cost} \times \text{annual review coordinator productivity level}}{\text{annual salary level of one FTE review coordinator}} \\
 &= \frac{\$4.00 \times 1500}{\$18,000} \\
 &= .3333333 \text{ or, rounding, } .33 \\
 &= 33\% \text{ (i.e., 67\% of the admissions must be focused out in this delegated hospital)}
 \end{aligned}$$

Part II. To find the review coordinator unit cost at a given focusing level and at given review coordinator productivity and salary levels:

$$\begin{aligned}
 \text{review coordinator unit cost} &= \frac{\text{given focusing level} \times \text{given salary level of one FTE review coordinator}}{\text{annual review coordinator productivity level}}
 \end{aligned}$$

Example 1

Given: in a delegated hospital,

- a) the focusing level is 50%
- b) annual salary level of one FTE review coordinator is \$15,000
- c) annual review coordinator productivity level is 4,000

$$\begin{aligned}
 \text{review coordinator unit cost} &= \frac{\text{given focusing level} \times \text{given salary level of one FTE review coordinator}}{\text{annual review coordinator productivity level}} \\
 &= \frac{50\% \times \$15,000}{4000} \\
 &= \frac{\$7500}{4000} \\
 &= \$1,875 \text{ or, rounding, } \$1.88
 \end{aligned}$$

Table V (Continued)

Analysis of Data (Indications)

- o For the lower end of productivity expectations (i.e., 1,800-2,000), it is necessary to focus at around 40% (i.e., 60% of cases exempt from review) to achieve the \$3.00 target for review coordinator unit cost.
- o At the other end of the average productivity expectation (i.e., 4,000), reaching the \$3.00 target requires focusing at about the 75%-80% level (i.e., 20-25% of cases exempt from review).
- o For a hospital with 3,000 Federal patients, an average size hospital in the sample, a focusing level of 50% is necessary to achieve a \$3.00 review coordinator unit cost.

Table VI - Number of Full-Time Equivalent Review Coordinators Needed for Various Admission Levels when Review Coordinator Productivity is 2,500 (10.1 reviews per day).

Rationale

Because review coordinator unit cost is dependent on review coordinator productivity and salary levels, the rate of focusing employed, and the number of Federal admissions, examination of those factors led to an analysis of their relationships. It should be recognized that "reviews" and "admissions" can differ. Unit cost analysis does not take into account the number of times a single patient's care is reviewed. Thus, 10.1 reviews refer to the average number of patients (admissions) whose care is reviewed per day.

Purposes of the Table

- 1) To identify the number of FTE review coordinators needed at given review coordinator productivity and annual Federal admission levels and desired focusing levels.
- 2) To identify the focusing levels necessary at given Federal admission and review coordinator productivity levels and at a desired number of FTE review coordinators.

Data Source

HCFA 153

Method of Calculation

Part I. To find the number of FTE review coordinators necessary to achieve a target review coordinator unit cost:

$$\begin{array}{lcl} \text{number of FTE review} & & \text{number of Federal} \quad \text{desired} \\ \text{coordinators needed} & = & \text{admissions} \quad \text{focusing level} \\ & & \text{review coordinator} \\ & & \text{productivity level} \end{array}$$

Table VI

Number of Full-Time Equivalent Review Coordinators Needed
for Various Admission Levels When
Review Coordinator Productivity Is
2,500 (10.1 reviews per day)

Number of
Federal Patients
Admitted
Per Year

Focusing Levels per Total Admissions

100%			75%	50%	40%	25%	20%
1,500	Line A .25		1,125	750	600	375	300
2,000	Line B .50		1,500	1,000	800	500	400
2,500			1,875	1,250	1,000	625	500
3,000			2,250	1,500	1,200	750	600
3,500	Line C 1.0		2,625	1,750	1,400	875	700
4,000			3,000	2,000	1,600	1,000	800
4,500			3,375	2,250	1,800	1,125	900
5,000			3,750	2,500	2,000	1,250	1,000
5,500			4,125	2,750	2,200	1,375	1,100
6,000			4,500	3,000	2,400	1,500	1,200

Figures above Line A represent focusing/productivity level requiring less than 0.25 FTE review coordinator

Figures at Line B represent 0.50 FTE review coordinator

Figures at Line C represent 1.0 FTE review coordinator

Table VI (Continued)

Example 1

Given: in a delegated hospital

a) number of Federal admissions is 5,000

b) desired focusing level is 75%

c) annual review coordinator productivity level is 2,500

$$\begin{aligned}
 \text{number of FTE review coordinators needed} &= \frac{\text{number of Federal admissions} \times \text{desired focusing level}}{\text{review coordinator productivity level}} \\
 &= \frac{5000 \times 75\%}{2500} \\
 &= \frac{3750}{2500} \\
 &= 1.5
 \end{aligned}$$

Part II. To find the focusing level necessary to achieve a target review coordinator unit cost:

$$\text{focusing level necessary} = \frac{\text{desired number of FTE review coordinators} \times \text{annual review coordinator productivity level}}{\text{number of Federal admissions}}$$

Example 2

Given: in a delegated hospital

a) desired number of FTE review coordinators is three

b) annual review coordinator productivity level is 2,500

c) number of Federal admissions is 10,000

$$\begin{aligned}
 \text{focusing level necessary} &= \frac{\text{desired number of FTE review coordinators} \times \text{annual review coordinator productivity level}}{\text{number of Federal admissions}} \\
 &= \frac{3 \times 2500}{10,000} \\
 &= \frac{7500}{10,000} \\
 &= .75 \\
 \text{focusing level necessary} &= 75\% \text{ (i.e., 25\% of the admissions must be focused out)}
 \end{aligned}$$

Table VI (Continued)

Analysis of Data (Indications)

- o Hospitals admitting between 2,500-3,000 Federal patients (performing at the shown productivity levels) and focusing near the 50% level can reduce the use of the review coordinator by at least half.
- o In this model, hospitals having fewer than 1,500 Federal admissions will need to focus to the 25% level in order to achieve the \$3.00 target. This will mean employing about a 0.15 FTE review coordinator.
- o For hospitals needing less than a 0.25 FTE, the value of performing concurrent review is questionable.
- o There is a notable difference in the number of FTEs needed, considering the different productivity levels.
- o In this model, the only situation in which it appears to be efficient (i.e., at desired cost and expected productivity levels) to employ a full-time review coordinator is when a hospital admits 5,000 or more Federal patients.

Table VII A - Examination of Total (Unit) Technical/Support Costs of Hospital-Delegated Review by Hospital Size

Rationale

Technical/support unit costs were examined to determine their relationship to review coordinator unit costs. Theoretically, if review coordinators are assisted by a great deal of technical/support staff, then the number of admissions reviewed will be at the upper end of the suggested workload range (i.e., 3,000 admissions). In large hospitals little or no use of technical/support staff may indicate inefficient utilization of review coordinators, while in small hospitals it may be more appropriate for review coordinators to perform technical/support tasks.

Because of potential reporting inconsistencies on the HCFA 153 forms, technical/support unit costs of both concurrent review and MCEs were examined together. Some hospitals recorded all their technical/support costs under concurrent review, while others split their technical/support costs between concurrent review and MCEs.

Purpose of the Table

To compare and contrast by means of high-to-low rank orderings total delegated hospital technical/support unit costs by hospital size.

Data Source

HCFA 153

Method of Calculation

$$\begin{array}{l} \text{Total technical/support} \\ \text{unit cost} \end{array} = \frac{\text{total technical/support cost}}{\text{number of Federal admissions}}$$

Table VII A

Examination of Total (Unit) Technical/Support Costs
of Hospital-Delegated Review
by Hospital Size

Group A	Group B	Group C	Group D	Group E	Group F
(< 1000)	(circa 1,000)	(circa 2,500)	(circa 4,000)	(circa 6,000)	(circa 10,000)
\$11.54	\$2.85	\$4.35	\$5.38	\$8.30	\$7.32
3.54	2.50	3.91	5.37	6.14	6.63
2.88	2.35	3.41	3.93	5.00	6.09
2.60	1.86	3.08	3.83	4.28	3.13
2.43	1.85	2.69	3.41	3.40	2.94
2.11	1.19	2.31	3.23	3.40	2.79
1.94	1.18	2.09	2.72	3.18	2.53
1.42	.99	2.08	2.69	2.62	2.36
1.21	.95	2.08	2.09	2.57	1.91
1.21	.58	1.90	1.90	1.87	1.40
.91	.54	1.57	1.69	1.75	1.29
.83	.51	1.43	1.35	1.04	1.17
.79	.50	1.30	1.25	.87	.94
.61	.34	1.23	.54	.49	
.55	.31	.97	.31	.49	
.47	.30	.50	.29	.32	
.29	.23	.19	.16	.25	
.26	.18	.16	.10	.14	
0	.14	.15			
0	.12	0			
0	.06	0			
0	0				
0	0				
	0				
	0				
	0				

Table VII B - Summary of Total (Unit) Technical/Support Costs of Hospital-
Delegated Review by Hospital Size

Rationale

See Rationale, Table VII A, page 39.

Purpose of the Table

To provide an overview for comparison/contrast purposes of the high, low, range, mean, and median of delegated hospital total technical/support unit cost for each size hospital group and for the entire sample group.

Data Source

HCFA 153

Method of Calculation

See method of Table VII A, page 39.

Table VII B
Summary of Total (Unit) Technical/Support Costs¹ of
Hospital-Delegated Review by Hospital Size

Hospital Size Based on Number of Federal Admissions	Number of Hospitals in Sample	High	Low	Range	Mean	Median	Explanatory Notes Regarding Modified Values: A modified value is identified by an asterisk and parentheses.
under 1,000	23	\$ 11.54	\$ 0	\$ 11.54	\$ 1.55	\$.83	Group A: Modified values were determined by excluding the highest cost and costs of zero from calculations.
Group A	(17)*	(3.54)*	(.26)*	(3.28)*	(1.25)*	(1.21)*	
circa 1,000	26	2.85	0	2.85	.75	.42	Groups B and C: Modified values were determined by excluding costs of zero from calculations.
Group B	(21)*		(.06)*	(2.79)*	(.93)*	(.54)*	
circa 2,500	21	4.35	0	4.35	1.69	1.57	
Group C	(19)*		(.15)*	(4.20)*	(1.86)*	(1.90)*	
circa 4,000	18	5.38	.10	5.28	2.24	2.00	
Group D							
circa 6,000	17	8.30	.14	8.16	2.56	2.22	
Group E							
circa 10,000	13	7.32	.94	6.38	3.12	2.53	
Group F							
All Groups	119 (107)*	11.54	0 (.06)*	11.54 (11.48)*	1.83 (2.03)*	1.29 (1.57)*	All Groups: Modified values were determined by excluding costs of zero from calculations.

¹ Total technical/support costs are those incurred in concurrent review and in Medical Care Evaluation studies.

Table VII C - Total (Unit) Technical/Support Costs - Hospital Delegated
Review [All Groups]

Rationale

See Rationale, Table VII A, page 39.

Purpose of the Table

To provide a rank ordering of total technical/support costs for
comparison/contrast purposes.

Data Source

HCFA 153

Method of Calculation

See method of Table VII A, page 39.

Table VII C

Total (Unit) Technical/Support Costs -
Hospital Delegated Review [All Groups]

1)	\$11.54	(A3)	32)	\$2.60	(A24)	63)	\$1.21	(A23)	94)	\$0.29	(D14)
2)	8.30	(E16)	33)	2.57	(E6)	64)	1.21	(A1)	95)	.26	(A13)
3)	7.32	(F3)	34)	2.53	(F6)	65)	1.19	(B2)	96)	.25	(E8)
4)	6.63	(F1)	35)	2.50	(B6)	66)	1.18	(B17)	97)	.23	(B25)
5)	6.14	(E5)	36)	2.43	(A5)	67)	1.17	(F11)	98)	.19	(C3)
6)	6.09	(F2)	37)	2.36	(F7)	68)	1.04	(E20)	99)	.18	(B16)
7)	5.38	(D7)	38)	2.35	(B26)	69)	.99	(B4)	100)	.16	(C3)
8)	5.37	(D3)	39)	2.31	(C4)	70)	.97	(C1)	101)	.16	(D6)
9)	5.00	(E7)	40)	2.11	(A19)	71)	.95	(B18)	102)	.15	(C2)
10)	4.35	(C19)	41)	2.09	(C15)	72)	.94	(F5)	103)	.14	(B1)
11)	4.28	(E3)	42)	2.09	(D19)	73)	.91	(A22)	104)	.14	(E11)
12)	3.93	(D2)	43)	2.08	(C21)	74)	.87	(E9)	105)	.12	(B13)
13)	3.91	(C10)	44)	2.08	(C9)	75)	.83	(A11)	106)	.10	(D9)
14)	3.83	(D13)	45)	1.94	(A27)	76)	.79	(A2)	107)	.06	(B11)
15)	3.54	(A16)	46)	1.91	(F9)	77)	.61	(A9)	108)	0	(A12)
16)	3.41	(C7)	47)	1.90	(D4)	78)	.58	(B27)	109)	0	(A14)
17)	3.41	(D17)	48)	1.90	(C22)	79)	.55	(A20)	110)	0	(A15)
18)	3.40	(E21)	49)	1.87	(E15)	80)	.54	(B3)	111)	0	(A17)
19)	3.40	(E18)	50)	1.86	(B5)	81)	.54	(D18)	112)	0	(A25)
20)	3.23	(D5)	51)	1.85	(B12)	82)	.51	(B21)	113)	0	(B20)
21)	3.18	(E14)		Mean		83)	.50	(B9)	114)	0	(B24)
22)	3.13	(F4)	52)	1.75	(E2)	84)	.50	(C12)	115)	0	(B19)
23)	3.08	(C11)	53)	1.69	(D12)	85)	.49	(E4)	116)	0	(B15)
24)	2.94	(F13)	54)	1.57	(C14)	86)	.49	(E19)	117)	0	(B7)
25)	2.88	(A6)	55)	1.43	(C16)	87)	.47	(A4)	118)	0	(C8)
26)	2.85	(B10)	56)	1.42	(A10)	88)	.34	(B22)	119)	0	(C18)
27)	2.79	(F12)	57)	1.40	(F8)	89)	.32	(F13)			
28)	2.72	(D16)	58)	1.35	(D1)	90)	.31	(D8)			
29)	2.69	(C20)	59)	1.30	(C5)	91)	0.31	(B8)			
30)	2.69	(D15)	60)	*1.29	(F10)	92)	.30	(B28)			
31)	2.62	(E17)	61)	1.25	(D10)	93)	.29	(A8)			
			62)	1.23	(C17)						

* Median

Tables VII A, VII B, VII C

Analysis of Data (Indications)

- o The mean unit cost is \$1.83.
- o There is a vast range in unit technical/support costs with 30% of the sample hospitals incurring less than \$.50 in technical/support unit cost.
- o Smaller hospitals may be showing very low technical/support unit costs because the review coordinator may be performing those functions.
- o In general, larger hospitals show larger technical/support unit costs.
- o For larger hospitals technical/support unit cost above \$4.00 seems too high.

Table VIII A - Delegated MCEs Unit Costs by Hospital Size

Rationale

MCEs generally do not represent a major component cost of total delegated hospital review. The unit costs of MCEs were examined to identify patterns of uncharacteristically high MCEs unit costs.

Purpose of the Table

To compare and contrast by means of high-to-low rank orderings the unit costs of hospital delegated MCEs by hospital sample groups.

Data Source

HCFA 153

Method of Calculation

$$\begin{array}{l} \text{unit cost MCEs} \\ \text{(per patient)} \end{array} = \frac{\text{total cost of MCEs}}{\text{number of Federal admissions}}$$

Table VIII A
Delegated MCEs Unit Cost by Hospital Size

Group A (< 1,000)	Group B (circa 1,000)	Group C (circa 2,500)	Group D (circa 4,000)	Group E (circa 6,000)	Group F (circa 10,000)
\$13.50	\$4.45	\$5.88	\$6.26	\$11.91	\$8.25
11.18	3.57	3.36	5.52	9.25	5.03
9.15	3.33	2.79	4.85	3.32	2.97
7.70	3.21	1.52	2.52	3.01	1.70
5.98	3.12	1.44	2.39	2.08	1.42
5.27	2.83	1.40	2.05	1.70	1.21
3.45	2.56	1.38	1.88	1.43	1.15
3.14	2.51	1.36	1.87	1.41	1.04
2.74	2.07	1.34	.88	1.25	.91
2.27	1.95	1.16	.87	1.11	.84
2.02	1.93	1.03	.79	.97	.65
1.81	1.22	.71	.76	.84	.12
1.81	1.12	.64	.70	.53	.06
1.42	1.02	.64	.43	.44	
1.33	.94	.49	.43	.41	
1.29	.93	.46	.30	.37	
1.14	.87	.43	.12	.30	
1.10	.84	.39	.08	.21	
1.00	.71	.32	.07		
.80	.68	.21			
.72	.60	.18			
.71	.56				
.18	.48				
	.32				
	.14				
	.13				

Table VIII B - Summary by Hospital Groups of Delegated MCEs Unit Costs

Rationale

MCEs unit costs vary within the selected groups as shown by the means, medians, and modes. In addition to analyzing MCEs unit cost per patient, the costs of MCEs were also examined from another perspective, cost per study, because such analysis can identify high MCEs costs not readily discernable otherwise. Previous HCFA examination of MCEs cost per study has shown that MCEs each cost between \$400 and \$600. Furthermore, some hospitals may have done less than the number of MCEs required. If so, their costs per study in Table VIII B are deflated.

Purpose of the Table

- 1) To provide an overview of the high, low, range, mean, and median for hospital delegated MCEs unit costs by hospital size group.
- 2) To illustrate, for purposes of contrast and comparison, the high, low, and mean of the per study MCEs cost by hospital sample size group.

Data Source

HCFA 153

Method of Calculation

$$\begin{array}{lcl} \text{unit cost MCEs} & = & \frac{\text{total cost MCEs}}{\text{number of Federal admissions}} \\ \text{(per patient)} & & \\ \\ \text{MCEs cost} & = & \frac{\text{total cost MCEs}}{\text{number of studies required*}} \\ \text{(per study)} & & \end{array}$$

* Based on the number of total hospital discharges.

Table VIII B
Summary by Hospital Groups of Delegated MCEs Costs

Hospital Size Based on Number of Federal Admissions	Number of Hospitals in Sample Size	Unit MCE Costs per Federal Admissions				Per Study		
		High	Low	Mean	Median	High	Low	Mean
Under 1,000 Group A	23	\$13.50	\$0.18	\$3.46	\$1.81	\$1,034	\$25.00	\$336
Circa 1,000 Group B	26	4.45	0.13	1.58	1.02	1,038	23.00	348
Circa 2,500 Group C	21	5.88	0.18	1.29	0.71	2,333	60.00	461
Circa 4,000 Group D	19	6.26	0.07	1.72	0.87	2,139	29.00	755
Circa 6,000 Group E	18	11.91	0.21	2.25	1.11	5,661	137.00	1,436
Circa 10,000 Group F	13	8.25	0.06	1.95	1.04	7,829	57.00	2,150

Table VIII C - Delegated MCEs Unit Costs [All Groups]

Rationale

See Rationale, Table VIII A, page 46.

Purpose of Table

To illustrate for purposes of contrast and comparison the unit MCEs costs of all delegated hospitals in the total sample regardless of size.

Data Source

HCFA 153

Method of Calculation

$$\begin{array}{lcl} \text{unit cost MCEs} & = & \frac{\text{total cost of MCEs}}{\text{number of Federal admissions}} \\ \text{(per patient)} & & \end{array}$$

Table VIII C

Delegated MCEs Unit Cost [All Groups]

1)	\$13.50	(A1)	31)	\$2.51	(B15)	61)	\$1.16	(C12)**	91)	\$0.64	(C8)
2)	11.91	(E7)	32)	2.39	(D17)	62)	1.15	(F12)	92)	.60	(B28)
3)	11.18	(A3)	33)	2.27	(A4)	63)	1.14	(A11)	93)	.56	(B2)
4)	9.25	(E5)	34)	2.08	(E5)	64)	1.12	(B3)	94)	.53	(E11)
5)	9.15	(A25)	35)	2.07	(B27)	65)	1.11	(E2)	95)	.49	(C20)
6)	8.25	(F3)	36)	2.05	(D11)*	66)	1.10	(A8)	96)	.48	(B5)
7)	7.70	(A17)	37)	2.02	(A27)	67)	1.04	(F6)	97)	.46	(C16)
8)	6.26	(D7)	38)	1.95	(B9)	68)	1.03	(C19)	98)	.44	(E20)
9)	5.98	(A16)	39)	1.93	(B12)	69)	1.02	(B7)	99)	.43	(C2)
10)	5.88	(C10)	40)	1.88	(D5)	70)	1.00	(A15)	100)	.43	(D8)
11)	5.52	(D15)	41)	1.87	(D18)	71)	.97	(E21)	101)	.43	(D14)
12)	5.27	(A10)	42)	1.81	(A12)	72)	.93	(B4)	102)	.41	(E13)
13)	5.03	(F2)	43)	1.81	(A22)	73)	.91	(F7)	103)	.39	(C5)
14)	4.85	(D3)	44)	1.70	(E14)	74)	.88	(D19)	104)	.37	(E16)
15)	4.45	(B25)	45)	1.70	(F9)	75)	.87	(B17)	105)	.32	(C18)
16)	3.57	(B19)	46)	1.52	(C15)	76)	.87	(D2)	106)	.32	(B6)
17)	3.45	(A5)	47)	1.44	(C22)	77)	.84	(E19)	107)	.30	(D13)
18)	3.36	(C7)	48)	1.43	(E17)	78)	.84	(F15)	108)	.30	(E8)
19)	3.33	(B20)	49)	1.42	(A13)	79)	.84	(B24)	109)	.21	(E9)
20)	3.32	(F3)	50)	1.42	(F4)	80)	.80	(A24)	110)	.21	(C3)
21)	3.21	(B1)	51)	1.41	(E4)	81)	.79	(D1)	111)	.18	(A14)
22)	3.14	(A19)	52)	1.40	(C4)	82)	.76	(D4)	112)	.18	(C13)
23)	3.12	(B18)	53)	1.38	(C21)	83)	.72	(A20)	113)	.14	(B16)
24)	3.01	(E18)	54)	1.36	(C11)	84)	.71	(A9)	114)	.13	(B13)
25)	2.97	(F1)	55)	1.34	(C1)	85)	.71	(B10)	115)	.12	(F11)
26)	2.83	(B6)	56)	1.33	(A6)	86)	.71	(C17)	116)	.12	(D9)
27)	2.79	(C14)	57)	1.29	(A2)	87)	.70	(D6)	117)	.08	(D12)
28)	2.74	(A23)	58)	1.25	(E6)	88)	.68	(B11)	118)	.07	(D10)
29)	2.56	(B25)	59)	1.22	(B21)	89)	.65	(F8)	119)	.06	(F10)
30)	2.52	(D16)	60)	1.21	(F13)	90)	.64	(C9)			

* Mean

** Median

Tables VIII A, VIII B, VIII C

Analysis of Data (Indications)

- o The mean MCEs unit cost is \$2.05 and the median is \$1.16.
- o In the model, a hospital performing concurrent review for approximately a \$5.00 unit cost (\$3.00 for review coordinator and \$1.80 to \$2.00 for technical/support and physician advisor) leaves \$1.45 for MCEs.
- o In the sample, 62% of the hospitals incurred costs of \$1.45 or less.
- o MCEs unit costs in the smallest hospital group have a higher mean and median than other groups. This is probably due to the fact that costs are spread over a smaller number of patients.
- o In each of the sample groups, the median figure is more descriptive than the mean because the mean is affected by a few cost extremes.
- o Table VIII C shows less variation in MCEs costs than is seen in the analysis of concurrent review.
- o It is somewhat difficult to explain how some of the very high costs per study are occurring. This may be an area to monitor.
- o It is useful to analyze MCEs cost per study in addition to the per unit for Federal patient, since the division of the expenses over a large number of Federal admissions may mask some questionable costs.
- o It was noticed, particularly in some large hospitals, that high costs per study contained high technical/support unit costs. In each case, high technical/support unit cost was also seen in concurrent review. This is worthy of note since most large hospitals use abstracting services, a cost reimbursed under G&A.

VII. Nondelegated Review - Part II Costs

Introduction

The fundamental purpose of the following analysis of nondelegated review costs is to examine unit concurrent review and unit MCE costs and to facilitate comparison with delegated review costs.

The responsibility and workload for the PSRO performing nondelegated review is essentially the same as that for delegated hospital review. Consequently, some of the findings in the analysis of delegated review apply to nondelegated review. For instance, review coordinator productivity appears to significantly affect unit review cost whether review is delegated or nondelegated. Furthermore, as focusing needs to be carefully coordinated with a reduction in full-time equivalent (FTE) review coordinators in delegated hospitals, so also PSROs need to coordinate their planning for focusing with the decision on the number of FTEs necessary.

Our analysis of nondelegated review costs contains an obstacle that could not be overcome with available data. Reconsideration costs for denials are recorded by PSROs in Part II, yet we were unable to determine either the number of reconsiderations handled or the cost of those reconsiderations. Reconsideration costs must be isolated in order to accurately determine unit cost per patient for concurrent review and MCEs and also to determine and evaluate reconsideration costs per case.

Table IX - Nondelegated Review Costs

Rationale

Nondelegated concurrent review and MCEs have been thought to be notably more costly than delegated concurrent review and MCEs. First, it is essential for the program to come to a greater understanding of whether nondelegated review is more costly and, if so, to explore the components (review coordinator, productivity, technical, or physician advisor) which contribute to that higher cost.

Second, while the question is not resolved by this analysis, OPSRO regional offices and PSROs are faced with the challenge to consider whether nondelegated review actually has to cost more than delegated review and how to bring nondelegated costs within range of delegated costs.

In examining nondelegated review costs, the number of discharges was obtained from the HCFA form 121. It is necessary to include partially delegated hospitals in any analysis of unit costs, but only for those components (e.g., concurrent review, or review coordinator, or MCEs) which are nondelegated. Column 8 of the new HCFA 121 form clearly delineates partially delegated discharges. In future use of that form for unit cost analysis, it will be necessary to carefully select the appropriate discharge figure.

Purpose of the Table

This table sets forth nondelegated review costs for concurrent review and MCEs. As with the analysis of delegated review, the important components are review coordinator unit cost, review coordinator productivity, unit concurrent review unit cost, MCE unit cost, and total review unit cost.

Data Sources

HCFA 151
HCFA 121

Method of Calculation

review coordinator unit cost	=	$\frac{\text{review coordinator}}{\text{number of nondelegated discharges}}$
review coordinator productivity	=	$\frac{\text{number of nondelegated discharges}}{\text{review coordinator FTE for concurrent review}}$

Table IX
Nondelegated Review Costs

PSRO	Number of Hospitals	Number of Discharges	Unit Cost Review Coordinator	Review Coordinator Productivity	Concurrent Review Unit Cost	MCE Unit Cost	Unit Cost Total Review
1	91	102,625	4.99	2770	\$11.36	\$.76	\$12.12
2	54	78,066	3.16	4132	5.11	.57	5.68
3	61	37,403	8.58	1422	16.49	1.41	17.90
4	44	26,100	5.31	1589	10.09	2.22	12.31
5	40	42,367	4.36	2921	7.25	--	7.25
6	27	14,030	12.20	644	23.98	.26	24.24
7	17	9,051	5.36	2852	8.76	.20	8.96
8	10	41,500	14.10	2643	27.77	.70	28.47
9	7	7,840	8.26	1519	12.88	1.20	14.08
10	7	29,374	6.75	2119	11.36	.76	12.12
11	6	28,185	4.40	2639	6.46	.02	6.48
12	5	15,753	4.09	3150	5.06	.09	5.15
13	3	1,776	9.57	1598	14.46	1.97	16.43
14	2	8,184	5.17	2211	9.68	.52	10.20
15	2	12,869	10.73	964	15.52	.48	16.00
16	2	19,905	8.25	1785	10.14	.08	10.22
17	1	5,781	6.59	2890	9.47	.75	10.22
18	1	2,769	2.28	5538	3.78	2.63	6.41
19	1	673	10.07	897	15.15	--	15.15
20	1	443	15.07	886	25.32	--	25.32

Table IX (Continued)

To find review coordinator FTE used in concurrent review, it is necessary to apportion. A discussion of apportionment techniques is on page 6.

Step 1--Divide the cost of all review coordinators used in concurrent review by the total cost of all review coordinators employed by the PSRO.

Step 2--Multiply the figure obtained in step 1 by the total number of FTE review coordinators employed (col. I, line A.1.) by the PSRO. The figure obtained is the review coordinator FTE used in concurrent review.

$$\begin{array}{lcl} \text{concurrent review} & = & \frac{\text{total concurrent review costs}}{\text{number of nondelegated discharges}} \\ \text{unit cost} & & \end{array}$$
$$\begin{array}{lcl} \text{MCEs unit cost} & = & \frac{\text{total MCEs costs}}{\text{number of nondelegated discharges}} \end{array}$$
$$\begin{array}{lcl} \text{total review} & = & \frac{\text{concurrent review plus MCEs total costs}}{\text{number of nondelegated discharges}} \\ \text{unit cost (part II)} & & \end{array}$$

Analysis of Data (Indications)

- o Everything that has been said about how to reduce delegated review costs also applies to nondelegated review.
- o Twelve of the twenty PSROs examined had unit review costs of approximately \$12.00 or less.
- o For these twelve, unit review costs do not seem to be affected by the number of hospitals or number of discharges. The PSROs selected for study are distributed throughout the country.

Table X - Travel Costs

Rationale

Travel costs have often been listed as one of the major reasons why non-delegated review is more costly than delegated review. It was largely supposed that travel represented a significant expenditure for PSROs. PSROs were selected that had sizeable nondelegated review responsibilities, were located in rural areas, or were State-wide PSROs, since high travel costs have been commonly associated with these types of PSROs. It should be noted that while the analysis includes only 20 PSROs, which is not a large sample, travel costs were found to be not as significant as previously thought.

Purpose of the Table

This table displays travel costs on a per patient basis both for concurrent review and for the combined concurrent review and MCEs total.

Data Sources

HCFA 151 (part II)
HCFA 121 (discharges)

Method of Calculation

$$\text{Unit cost travel for concurrent review} = \frac{\text{total concurrent review travel costs}}{\text{number of nondelegated discharges}}$$
$$\text{Total unit cost travel} = \frac{\text{concurrent review travel costs} + \text{plus MCEs travel costs}}{\text{number of nondelegated discharges}}$$

Analysis of Data (Indications)

- o Contrary to previous assumptions, travel costs generally do not appear to be a major expense in nondelegated review.
- o Travel costs vary on a unit basis.

Table X
Travel Costs
Nondelegated Review

PSRO	Travel Concurrent Review Total Costs	Travel Unit Cost Concurrent Review	Travel Total Unit Cost
1	\$14,837	\$.15	\$.17
2	9,902	.13	.20
3	34,345	.90	1.00
4	6,410	.25	.31
5	9,511	.22	.22
6	24,958	1.78	1.78
7	1,944	.22	.22
8	1,232	.03	.03
9	1,385	.18	.21
10	568	.02	.03
11	9,903	.35	.35
12	295	.02	.02
13	1,542	.87	1.05
14	144	.02	.02
15	296	.02	.02
16	15,649	.77	.81
17	3,416	.59	.71
18	178	.06	.11
19	334	.49	1.12
20	170	.38	.38

Table XI - "Fall Out" PSROs

Rationale

In the analysis of nondelegated review costs, certain PSROs incurred costs that were significantly different from the range of costs incurred by the other PSROs.

These PSRO costs are displayed on a separate table, not to highlight their expenditures but to demonstrate that variant costs should be isolated and investigated. Often, as in the case of PSRO No. 2, the subcontract inflated the unit concurrent review costs. Followup might reveal that the subcontract is not a Part II cost but rather belongs in Part I. Closer examination is necessary for all three "fall out" PSROs to decipher legitimate expenditures, to identify reporting errors, or to reevaluate the nondelegated review system.

Purpose of the Table

The table demonstrates the need to recognize and examine costs which differ notably from other PSRO costs and to seek the cause or causes for the differences.

Data Source

HCFA 151

HCFA 121

Method of Calculation

review coordinator unit cost = $\frac{\text{review coordinator total cost}}{\text{number of nondelegated discharges}}$

review coordinator productivity = $\frac{\text{number of nondelegated discharges}}{\text{review coordinator FTE for concurrent review}}$

Table XI
"Fall Out" PSROs

PSRO	Number of Hospitals	Number of Discharges	Unit Cost Review Coordinator	Review Coordinator Productivity	Concurrent Review Unit Cost	MCE Unit Cost	Unit Cost Total Review	Travel Concurrent Review Total Cost	Travel Unit Cost Concurrent Review	Travel Total Unit Cost
1	1	383	31.45	1,367	43.30*	60.07	103.37	1249	3.26	12.05
2	1	241	2.45	--	177.63**	.73	178.36	2374	9.85	10.58
8		688	79.32	77	141.57	--	141.57	184	.27	.27

* In 4th quarter concurrent review unit was \$13.30.

* Subcontract for \$37,081 (not for data) shown under concurrent review.

* Concurrent review unit costs minus this subcontract are \$23.77.

* One quarter estimated based on other three quarters discharges.

Table XI (Continued)

Analysis of Data (Indications)

- o Some of these findings can be explained by three possibilities:
 - There could be serious reporting errors;
 - There could be hidden errors in our examination of the data; or
 - These could be very unusual activities/costs.
- o In doing similar analyses, the regional Project Officer may find it helpful to "flag" aberrant data as was done in Table XI.

VIII. Areawide Review - Part III Costs

Introduction

The necessity to reduce average per Federal patient review costs includes the necessity to reduce areawide costs. Areawide costs are included in the negotiated fixed rate for delegated hospital review. Consequently, it is necessary to analyze and evaluate the level of areawide spending. PSROs need to be aware of the relationship between areawide costs and the fixed negotiated rate in planning for activities which are funded as areawide costs.

Major Cost Components in Areawide Costs

Areawide costs cover three principal program elements. The chief cost is PSRO monitoring of the review process in delegated hospitals. This is most often monitoring via onsite visits by PSRO personnel. The second cost included is for data. This includes the processing of costs and preparation of physician and hospital profiles. The third element is costs incurred for areawide MCEs and physician costs for criteria development.

In order to isolate costs, the following determination was made. Monitoring costs are equal to total areawide costs less data costs.

Monitoring = Areawide - data

For the reporting period covered by the analysis, very few areawide MCEs were reported. Consequently, it was assumed that they represented a negligible part of areawide costs and no attempt was made to isolate them.

While physician costs for the development of criteria sets are included in areawide costs, preliminary examination showed \$.10 per Federal patient cost. Once assured that our sample of PSROs did not incur high physician costs, we chose not to separate out that portion of monitoring expenses. In doing their own analyses, regional offices and PSROs need to scan these individual elements for potential problem areas.

Table XII - PSRO Monitoring Costs for Delegated Hospitals 7/77-6/78

Rationale

The cost of monitoring delegated hospitals is an expense the PSRO incurs. It involves both onsite visits by PSRO employees and analysis and interpretation of hospital and physician profiles. To better understand these costs, it is necessary to take several perspectives according to the different workloads:

- unit cost per Federal patient
- unit cost per delegated patient
- unit cost per delegated hospital
- review coordinator unit cost per delegated hospital
- technical unit cost per delegated hospital
- support unit cost per delegated hospital

The reason the analysis was done both per Federal patient and per delegated Federal patient was the potential masking of costs when analysis is done solely per Federal patient. The monitoring workload is the delegated Federal patient. From another perspective, the monitoring workload is the number of delegated hospitals. Consequently, it is necessary to analyze monitoring costs from both perspectives. In addition, unit cost analysis extends to the principal components of monitoring (e.g., review coordinator and technical/support).

Purpose of the Table

This table separates the major cost elements in monitoring (i.e., review coordinator and technical/support per delegated hospital basis). It also highlights the need to analyze PSRO monitoring costs per Federal patient, per delegated Federal patient, and per delegated hospital because of the potential for masking in any single line of analysis.

Data Source

HCFA 151
HCFA 121

The number of delegated hospitals is no longer available on the reviewed HCFA 121 form. That number is necessary to perform this type of analysis.

Table XII
PSRO Monitoring Costs for Delegated Hospitals 7/77-6/78

	Delegated Hospitals	Unit Cost	Unit Cost	Unit Cost	Rev.Coord. Unit Cost Per Hosp.	Tech. Unit Cost Per Hosp.	Support Unit Cost Per Hosp.
		Per Fed. Pat.	Per Delegated Patient	Per Delegated Hospital			
1	90	\$ 1.12	\$ 1.12	\$ 2,096	\$ 1,024	\$ 241	\$ 142
2	57	1.35	1.34	1,863	913	242	105
3	48	4.76	4.86	9,575	2,345	891	1,167
4	47	2.53	2.59	3,387	1,498	805	416
5	33	.87	1.45	3,876	1,464	1,249	1,249
6	33	1.86	1.86	7,695	2,606	1,567	333
7	29	2.04	2.04	5,716	2,190	1,132	434
8	26	.99	1.08	4,113	1,631	958	750
9	19	2.68	2.86	7,433	858	1,630	1,172
10	17	2.51	2.51	7,321	4,129	1,336	1,475
11	16	3.94	3.94	10,194	3,543	1,933	1,389
12	15	5.97	5.97	10,233	2,011	3,781	1,406
13	15	2.91	2.91	4,592	2,024	1,300	303
14	15	1.58	1.61	5,979	1,679	2,228	703
15	13	3.79	4.04	12,604	3,817	2,422	821
16	14	2.58	2.58	7,764	2,801	2,080	--
17	12	3.32	3.49	8,293	4,302	3,543	426
18	12	3.33	9.54	11,311	2,479	6,444	432
19	11	2.16	2.21	18,172	2,283	3,204	652
20	11	2.39	2.83	10,679	5,903	4,999	3,677
21	8	2.21	2.24	10,064	3,381	4,021	--
22	8	2.28	2.28	6,429	2,063	2,063	1,442
23	7	2.77	2.77	11,364	2,506	2,883	1,996
24	7	4.19	4.19	12,416	3,992	6,439	--
25	5	2.70	2.70	9,856	4,520	2,016	--
26	5	3.34	24.09	79,498	30,222	29,267	29,267
27	4	1.55	6.50	10,156	2,163	493	--
28	2	2.31	4.66	18,685	917	3,432	5,338
29	2	2.44	5.15	10,341	4,352	4,445	1,253
30	2	1.03	15.98	16,126	64	6,466	5,924
31	1	6.12	15.36	73,929	24,346	21,700	8,027

Table XII (Continued)

Method of Calculation

unit cost per Federal patient	=	$\frac{\text{total areawide costs minus data costs}}{\text{total Federal discharges}}$
monitoring unit cost per delegated Federal patient	=	$\frac{\text{total areawide costs minus data costs}}{\text{number of delegated Federal discharges}}$
monitoring unit cost per delegated hospital	=	$\frac{\text{total areawide costs minus data costs}}{\text{number of delegated hospitals}}$
monitoring unit cost review coordinator per delegated hospital	=	$\frac{\text{total review coordinator costs}}{\text{number of delegated hospitals}}$

Purpose of this Calculation

To single out cost of personnel deployed to onsite monitoring activities thereby determining its value or efficiency.

technical unit cost per delegated hospital	=	$\frac{\text{total technical costs}}{\text{number of delegated hospitals}}$
support unit cost per delegated hospital	=	$\frac{\text{total support costs}}{\text{number of delegated hospitals}}$

Table XII (Continued)

Analysis of Data (Indications)

- o Areawide unit costs are included in the current fixed rate of \$8.70.
- o In this model, with a \$6.45 unit cost set aside for delegated hospital review (\$5.00 for concurrent review and \$1.45 for MCEs), \$2.25 remains for areawide costs.
- o Based on this model, the areawide costs per Federal patient shown in this table are now too high.
- o The table shows that some PSROs are spending excessive amounts on monitoring and other areawide costs (other than data).
- o PSROs need to adopt more efficient monitoring methods, especially greater dependence on data analysis with less onsite monitoring.
- o Areawide unit costs, including data, that exceed \$2.25 will leave too little funds for concurrent review and MCEs. To the extent PSROs use Part III as a "catchall," this problem is exacerbated.

Table XIII - Areawide Review Costs and Their Relationship to the \$8.70 Review Cost Target

Rationale

Since areawide costs are included in the negotiated fixed rate for PSRO review activities, it is as important to examine the areawide costs as it is to examine the cost of concurrent review and MCEs. The PSRO needs to evaluate or reconsider its total review system in order to allot its delegated hospitals sufficient funds to perform review. If both areawide and concurrent review/MCEs unit costs are high, Project Officers, PSROs, and delegated hospitals need to work closely to reconsider how much review the fixed negotiated rate can fund.

This analysis assumed that since areawide MCEs activity was minimal for the time period examined, then monitoring costs equal total areawide costs minus data. PSROs performing areawide MCEs will have to separate all these costs thoroughly to get an accurate picture of data and monitoring costs.

Lastly, it is necessary to restate that physician costs for setting criteria were examined and were found to be \$.08-.10 per patient. This small unit cost was not isolated, but PSROs and regional offices need to perform at least a preliminary examination on items such as this.

Purposes of the Table

- 1) To analyze the principal Part III costs, data, and monitoring on a per patient basis.
- 2) To identify the remaining funding available for delegated review when Part III unit cost is deducted from \$8.70 or the negotiated rate. PSROs have to consider the effect their Part III costs have on the allotment for delegated review.

Data Source

Number of discharges: HCFA 121
Part III cost data: HCFA 151

Table XIII

Areawide Review Costs and Their Relationship
To The \$8.70 Review Cost Target

						if \$8.70, then leave
		Total Cost	Unit Cost	Unit Cost	Total Costs	
Discharges	Data	Data	Monitoring	Part III	for review	
1	169,911	87,427	\$.51	\$1.12	\$1.63	\$7.07
2	146,850	73,245	.50	.87	1.37	7.33
3	136,778	-	-	1.85	1.85	6.85
4	119,120	116,090	.97	3.34	4.31	4.39
5	108,308	48,278	.44	.99	1.43	7.27
6	96,530	10,711	.11	4.74	4.87	3.83
7	83,318	28,205	.34	2.39	2.73	5.97
8	81,341	54,372	.66	2.04	2.70	6.00
9	78,492	38,784	.49	1.35	1.84	6.86
10	62,892	2,106	.03	2.53	2.56	6.14
11	55,694	17,969	.32	1.61	1.93	6.77
12	52,747	16,512	.31	2.68	2.99	5.71
13	49,405	31,153	.63	2.51	3.14	5.56
14	43,103	5,500	.13	3.79	3.92	4.78
15	42,151	12,002	.28	2.58	2.86	5.84
16	42,018	11,156	.27	2.16	2.43	6.27
17	41,379	50,000	1.21	3.94	5.15	3.55
18	38,612	21,755	.56	3.32	3.88	4.82
19	36,394	20,190	.55	2.21	2.76	5.94
20	35,341	29,173	.83	1.45	2.28	6.42
21	31,392	23,347	.74	1.03	1.77	6.93
22	30,589	24,548	.80	3.33	4.13	4.57
23	28,693	23,316	.81	2.77	3.58	5.12
24	26,100	3,429	.13	1.55	1.68	7.02
25	25,746	38,090	1.47	5.96	7.43	1.26
26	23,613	16,753	.71	2.91	3.62	5.08
27	20,712	6,880	.33	4.19	4.52	4.18
28	18,210	7,725	.43	2.70	3.13	5.57
29	16,196	6,362	.39	2.31	2.70	6.00
30	12,075	7,376	.61	6.12	6.73	1.97
31	9,988	818	.08	2.17	2.25	6.45

Table XIII (Continued)

Method of Calculation

Data unit cost = $\frac{\text{data subcontract cost (col. 7, line 1D.)}}{\text{number Federal discharges (col.8, line 7C.)}}$

Monitoring unit cost = $\frac{(\text{col. 7, line I}) \text{ minus } (\text{col. 7, line D})}{\frac{\text{Total areawide cost minus data costs}}{\text{Number of Federal discharges}}}$

Total areawide unit = $\frac{\text{Total areawide costs (col. 7, line I)}}{\text{Number of Federal discharges}}$

If \$8.70, then leave _____ for delegated review,
= fixed negotiated rate (\$8.70) - unit areawide costs.

Comment

The costs for unit monitoring reflect a monitoring system oriented towards onsite visits by PSRO personnel. A more effective monitoring system involves a shift from that method to a more data oriented, profile analysis effort wherein the PSRO can more accurately oversee whether the hospital's review system is properly designed and implemented. Increased reliance on data, with its extensive potential for PSROs, is a primary reason why the cap on data costs was lifted. With more money available for data and greater data demands for monitoring, PSROs may be inclined to consider more complex interactive data systems.

Analysis of Data (Indications)

- o Lifting of the cap on data costs (Transmittal No. 85) will facilitate better use of data, with PSROs doing more and better profiling.
- o Through data analysis and feedback to hospitals and physicians, PSROs can reduce the need for 100% concurrent review and develop alternatives to onsite monitoring.
- o Data analysis (profiling) is one of the primary ways to look at patterns of practice.
- o Nine of 31 PSROs in the sample show unit areawide costs at or below the \$2.25 model target.
- o By subtracting a PSRO's areawide costs from its total unit review costs, an assessment of how much money is being left for delegated hospital review can be made. The last column of the table does this using the \$8.70 unit review cost target.

IX. Conclusions and Recommendations

Through the analysis of the cost data and the development of the model, several recommendations can be made. The following recommendations may be very helpful as PSROs and regional Project Officers consider the costs of present activities or prepare for planned modifications in the review systems.

1. In order to meet the average nationwide cost target, many PSROs will have to alter their present systems to include focusing and/or other modifications.
2. Focusing needs to be coupled with the use of data to examine patterns of practice not only to help identify areas for focusing in or out but also for monitoring the impact of focused review.
3. It is important for PSROs to examine their data systems for present capabilities and possible improvements. They might also consider how they can use their data systems more efficiently. In addition, PSROs, especially younger organizations, need to identify other data sources (e.g., fiscal agents and hospital data systems) that they can use.
4. Focusing raises several issues in relation to staffing patterns within PSROs and delegated hospitals. Serious consideration should be given to the number and types of staff persons required under a focused review system. In addition, the duties of staff persons should be reevaluated in light of the need for increased reliance on data analysis and profiling. Staff reduction/reorganization may be inevitable.
5. PSROs should begin to closely examine MCEs in relation to costs per study as well as costs per Federal patient. In hospitals with a large number of Federal patients, a low per patient cost can mask a high per unit cost per study. For example, one delegated hospital had a per patient cost of \$1.25, yet its per study cost was \$7,000. An estimate developed by OPSRO in a previous analysis of 32 PSROs shows that MCEs cost between \$400 and \$600 per study.



CBS LIBRARY



3 8095 00014903 5